

Appln No. 09/692,554

Amdt date December 1, 2004

Reply to Office action of September 22, 2004

REMARKS/ARGUMENTS

Claims 1, 3-15, 17-21, 23, 27-31, 33,-39, 41-44, 46, 48-54, 56-60, 62, 64, 66-71, 73-76, and 78-88 are pending. Claims 1, 3, 5, 7, 13-14, 36-39, 42, 46, 52, 64, 66, and 81 are amended. The Specification and drawings are also amended to correct typographical errors. No new matter is added.

The IDSs filed on August 19, 2002 and July 30, 2001 were not fully considered because copies for some of the references under "OTHER DOCUMENTS" were not received by the Examiner. Copies for the documents marked "No Copies" by the Examiner are enclosed. Accordingly, Applicants respectfully request consideration and acknowledgment of the above-mentioned IDSs by initialing and returning the attached copies of the same IDSs.

Drawings are objected to because figures 26 and 27 are not readable. The enclosed 35 sheets formal drawings include readable figures 26 and 27 and replace all of the drawings as originally filed. Therefore, it is respectfully requested that the above objection be withdrawn.

Per Examiner's suggestion, the Abstract has been rewritten to more accurately reflect the claimed invention.

Claims 3, 5, 7, 13, 14, 39, 42, 46, 52, 66, and 78-88 are objected to because of informalities. In view of the amendments to the above claims, it is respectfully requested that the above objection be withdrawn. C Also, claims 78-88 are now correctly labeled as "Previously Presented."

Claims 1, 3, 5, 8, 9, 11, 14, 27, 31, 46, 48, 50, 53, 64, 66, 78-83, 87, and 88 are rejected under 35 U.S.C. 102(a) as being anticipated by Mark (U.S. 5,949,874). Claims 21, 35, 60,

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and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mark (U.S. 5,949,874). Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mark (874) in view of Tsai et al (U.S. 6,393,124 B1). Claim 34 under 35 U.S.C. 103(a) as being unpatentable over Mark (874) in view of McCarthy (U.S. 5,333,191). Claims 7, 13, 29, 52, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mark (874) in view of Brember et al (U.S. 5,311,578). Claims 15, 23, 33, 38, 39, 41, 54, 62, 71, 73, 85, and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mark (874) in view of Mark (U.S. 5,583,933). Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mark (874) and Mark (933) as applied to claim 39, and further in view of Tsai. Claims 42 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mark (874) and Mark (933) as applied to claims 39 and 71, and further in view of McCarthy.

Applicants submit that all of the pending claims are patentable over the cited references, and reconsideration and allowance of the pending claims are respectfully requested.

Amended independent claims 1, 46, 64 and 81 include, among other limitations, separating "one of the components from the composite signal," sampling "a portion of the separated component," and detecting "from the sampled portion of the separated component whether the separated component comprises the tone." Mark (874) does not teach, nor does it suggest the above limitations.

Rather, Mark (874) describes a user-authentication system including an authorized user device (AUD) for transmission of

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DTMF tones to a user-verification system (UVS) over a telephone network. The system of Mark only transmits tone signals and not a "composite signal" from which a tone to be detected. Mark (874) stresses that "the AUD transmits tone signals from a telephone 2 or 4, a computer 6, or a cellular phone 7 which routes the tone signals via a cellular switch 9, over the telephone network to a central switch 8. At the cellular switch 9 certain preliminary security measures can be imposed before the tone signals are routed to a UVS 12." (Col. 16, lines 24-29, underlining added.).

Furthermore, the cited FIG. 4B of Mark (874) is a "representation of the format of the tone signals 600 transmitted to the central switch by the AUD. As shown, the tone signals 600 include a system alert tone signal 602" (Col. 16, lines 59-62, underlining added.) Consequently, Mark (874) does not disclose "whether the separated component comprises the tone," because the alledged components of FIG. 4B are already part of the tone signal.

Additionally, Mark (874) does not teach separating "one of the components from the composite signal," sampling "a portion of the separated component," and detecting "from the sampled portion of the separated component whether the separated component comprises the tone," as recited by the independent claims 1, 46, 64 and 81. As a result, independent claims 1, 46, 64 and 81 are not anticipated by Mark (874) and are allowable over cited references.

Dependant claims 3-7, 48-52, 66-70, and 27-29 depend directly or indirectly from allowable claims 1, 46, 64 and 81,

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respectively, and thus are allowable as are claims 1, 46, 64 and 81, and for additional limitations recited therein.

Independent claim 8 includes, among other limitations, "separating the composite signal into its first and second components," "detecting from a portion of the first component whether the first component comprises a first one of the dual tones," and "detecting from a portion of the second component whether the second component comprises a second one of the dual tones." Again, Mark (874) does not describe a "composite signal" from which a tone to be detected. Also, as discussed above, Mark (874) does not disclose "whether the first component [of the composite signal] comprises a first one of the dual tones," or "whether the second component [of the composite signal] comprises a second one of the dual tones." Moreover, Mark (874) does not teach "separating the composite signal into its first and second components," and "detecting from a portion of the first component and second component whether the respective component comprises a tone. Accordingly, independent claim 8 is not anticipated by Mark (874) and is allowable over cited references.

Dependant claims 9-13 depend directly or indirectly from allowable claim 8, and thus are allowable as are claim 8, and for additional limitations recited therein.

Independent claims 14, 31, and 53 include, among other limitations, "separating the composite signal into its first and second components," "determining a frequency for each of the first and second components," and "detecting as a function of the determined frequency for each of the first and second

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components whether either of the first and second components comprises the tone." Once more, Mark (874) does not describe a "composite signal" from which a tone to be detected. Also, as explained above, Mark (874) does not disclose "whether either of the first and second components [of the composite signal] comprises the tone." Furthermore, there is no disclosure in Mark (874) about "determining a frequency for each of the first and second components [of the composite signal]," and "detecting as a function of the determined frequency for each of the first and second components whether either of the first and second components comprises the tone," as required by the independent claims 14, 31, and 53. Thus, independent claims 14, 31, and 53 are not anticipated by Mark (874) and are allowable over cited references.

Dependant claims 15, 17-21 23, 78-80, 33-38, and 54, 56-60, 62, and 87-88 depend directly or indirectly from allowable claims 14, 31, and 53, respectively, and thus are allowable as are claims 14, 31, and 53, and for additional limitations recited therein.

Independent claims 39 and 71 include, among other limitations, "a first bandpass filter to separate the first component from the composite signal," "a second bandpass filter to separate the second component from the composite signal." Applicants respectfully disagree with the assertion in the Office action that Mark (874) discloses the above limitations. (See Office action, page 19, last two paragraphs.). As explained above, Mark (874) does not describe a "composite

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signal" from which a tone to be detected. The tone signals of Mark (874) are not the same as the claimed "composite signal."

Independent claims 39 and 71 further include, among other limitations, "a first comparator to compare the frequency of the first component [of the composite signal] to at least one of a plurality of frequency ranges to determine whether the separated first component comprises one of the dual tones," and "a second comparator to compare the frequency of the separated second component [of the composite signal] to at least one of the frequency ranges to determine whether the second component comprises the other one of the dual tones." The Examiner agrees that Mark (874) does not disclose the above limitation, however, the Examiner states that Mark (933) discloses the above limitations. Applicants respectfully disagree.

Mark (933), like Mark (874) does not disclose a "composite signal" from which a tone to be detected. The frequency detectors of Mark (933) detect only DTMF tones, and not a composite signal from which a tone to be detected. (See, for example, col. 11, lines 17-30). Moreover, the cited table of figure 8B shows "accept/reject and out-of-range frequencies, of a standard DTMF detector circuit." (Col. 6, lines 61-63, and col. 16, lines 65-68). Therefore, independent claims 39 and 71 are patentable over Mark (874), Mark (933), and other cited references.

Dependant claims 41-44, 85-86, and 73-76 depend directly or indirectly from respective allowable claims 39 and 71, and thus are allowable as are claims 39 and 71, and for additional limitations recited therein.

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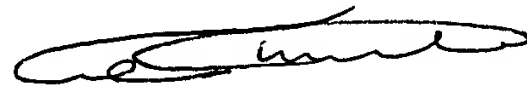
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In view of the foregoing amendments and remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By



Raymond R. Tabandeh

Reg. No. 43,945

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